KOSMOS MALABARES

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USER MANUAL

SMALL PRODUCTS WITH MAGNETIC PROGRAMMING AND DUAL PROGRAM

USER MANUAL

Thank you for purchasing our product.
Please take some time to read this simple manual in order to get full benefit and care of the Kosmos Malabares illuminated and magnet-programmable products.

This manual is valid for small products by Kosmos Malabares with Magnetic programming and Dual program features.

All Kosmos Malabares illuminated products are the result of many years of experience, which have allowed us to standardize some use and quality features. Still, we expect to keep growing with you in order to be able to offer better products and performance, so do not hesitate to contact us to share any concerns you may have at www.kosmosmalabares.com

INDEX

INTRODUCTION

Magnetic programming	3
Dual program	4

GENERAL FEATURES

New features	5
Turning ON and OFF	5
Changing program	6
Choose a color	7
Save desirate program	7
Activate a second program memory	7
Programming chart	8
Battery charging	9
System reset	9
Program tables	10

MORE

Looking after your product	11
12 Month warranty	11
FAQs Frequently asked questions	12

INTRODUCCION

Magnetic programming®

This technology has been developed by Kosmos Malabares in 2006. Since that time it has changed the standard in illuminated juggling products making easier to use and durable.

The main features are:

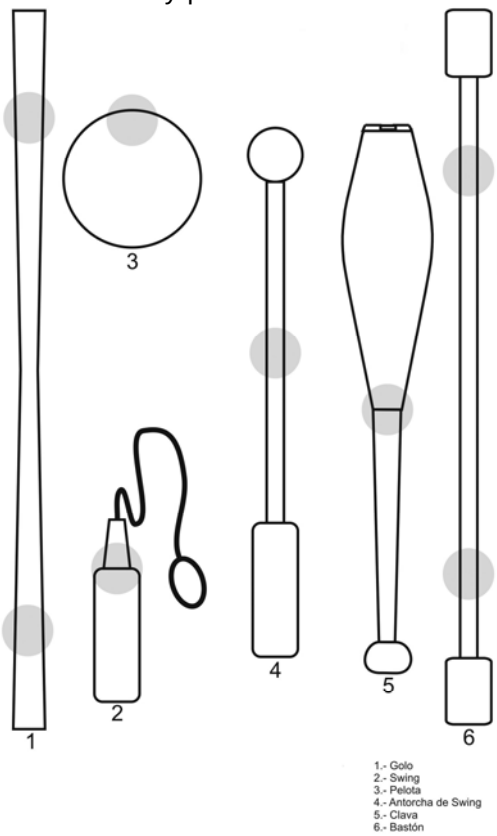
- Shockproof design
- Not affected by intensive use or time.
- Allows choosing 42 colors / 1500 color combinations.
- Easy to turn on/off
- Program memory, do not need to select the program on every use.
- It works with every conventional mid power magnet.

The principle of use is easy. When sliding a magnet close to the sensitive area, the product will detect it and flash 1 second light in red. This is called *"short pulse"*
If the magnet is moved to the sensitive area and kept on it until the red flash is off, this is called *"long pulse".*

With a combination of short and long pulses is possible to set all features, chose colours and more else. See "General features" chapter for more information.
All Kosmos Malabares products include a magnet in their supply. This is a normal magnet. In case it gets lost, every medium power magnet can be used.

Magnet sensitive area:
See the following diagram to find the sensitive area in every product:

Note:
In the ball the sensitive area
Is opposite to the charging
Connector.



Dual program®

Every professional show needs more stages with different colours or scenarios. Dual Program technology allows the products to store up to 2 custom programs. This feature improves the product customisation by duplicating the programming choices. It also enables to the user to use either programs or only one. When using this feature during performances, the any of the stored programs can be activated or switched from one to the other one with no necessity of entering program mode. Every program stores its own colours and parameters.

GENERAL FEATURES

Innovation:

Following new features are present in all ***JS²*** products:

- Magnetic programming system.
- Touch sensor technology
- NiMh batteries, light and with minimum memory effect.
- Battery life between 3 and 6 hours (when fully charged).
- Shockproof design..
- RGB LED technology.
- 42 colours that can be freely selected and mixed. More than 1500 combinations.
- DEMO mode displays all the modes automatically
- Memorization of 1 or 2 operating program.
- ***JS²*** communication module

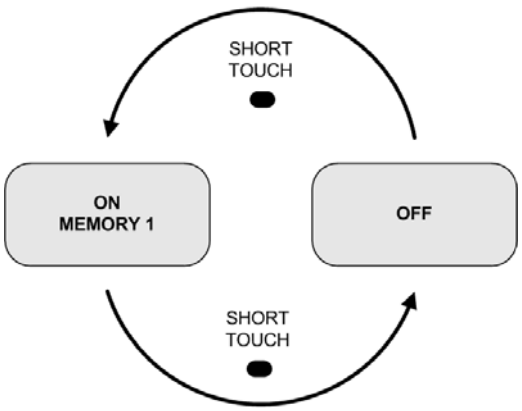
Turning ON and OFF

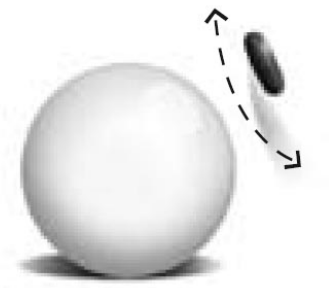
The products with dual programming feature allow activating 1 or 2 any program from the program list. In case of 2 program are activated, is possible to switch from firs one to second one without entering on program mode.

One active program operation:

1) Switch on the illuminated product by sliding the magnet over the sensitive area. The product will always glow in the previously saved program.

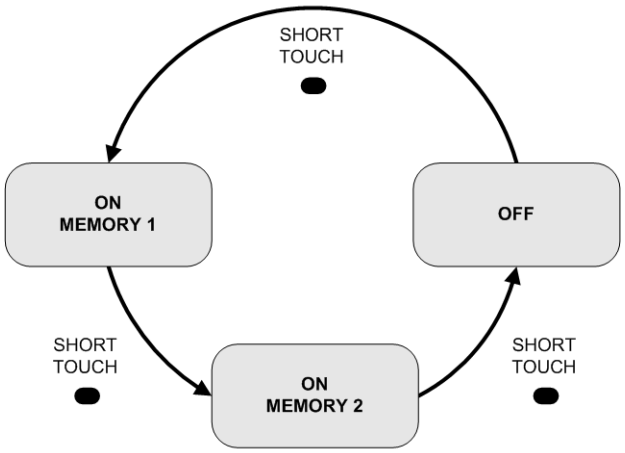
2) Switch it off by sliding the magnet again. The program stored in position 2 is not active.





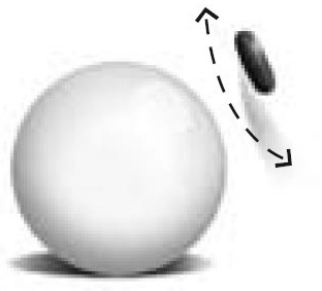
Two active program operation:

1) Switch on the illuminated product by sliding the magnet over the sensitive area (see *Magnetic Programming)*. The product will always glow in the program stored in memory 1.
2) Slide the magnet again to switch to the program stored in memory position 2.
3) Switch it off by sliding the magnet again.



In order to avoid unwanted operation, never transport the magnet close to the illuminated products sensible zone.

Changing the program



1) Switch on the illuminated product

2) Enter the program menu by holding the magnet on the sensible zone until the red goes off. When is already off move the magnet away. The program menu is now active.

3) Change the active program by short touches. After every touch the next program in the list will be active (see program table).

Choose a color

Programs 1 and 5 (see program tables*)* allows to select the first and second colours. That customized colours are used in following programs in the list (see program table). Those colours can be used still, flashing at different speeds or combined between first and second one. This feature increases the total colour combinations up to 1500.
To choose a colour, see the slow sequence of 42 colours. Make a short touch just in time when the one you want to select is displaying.

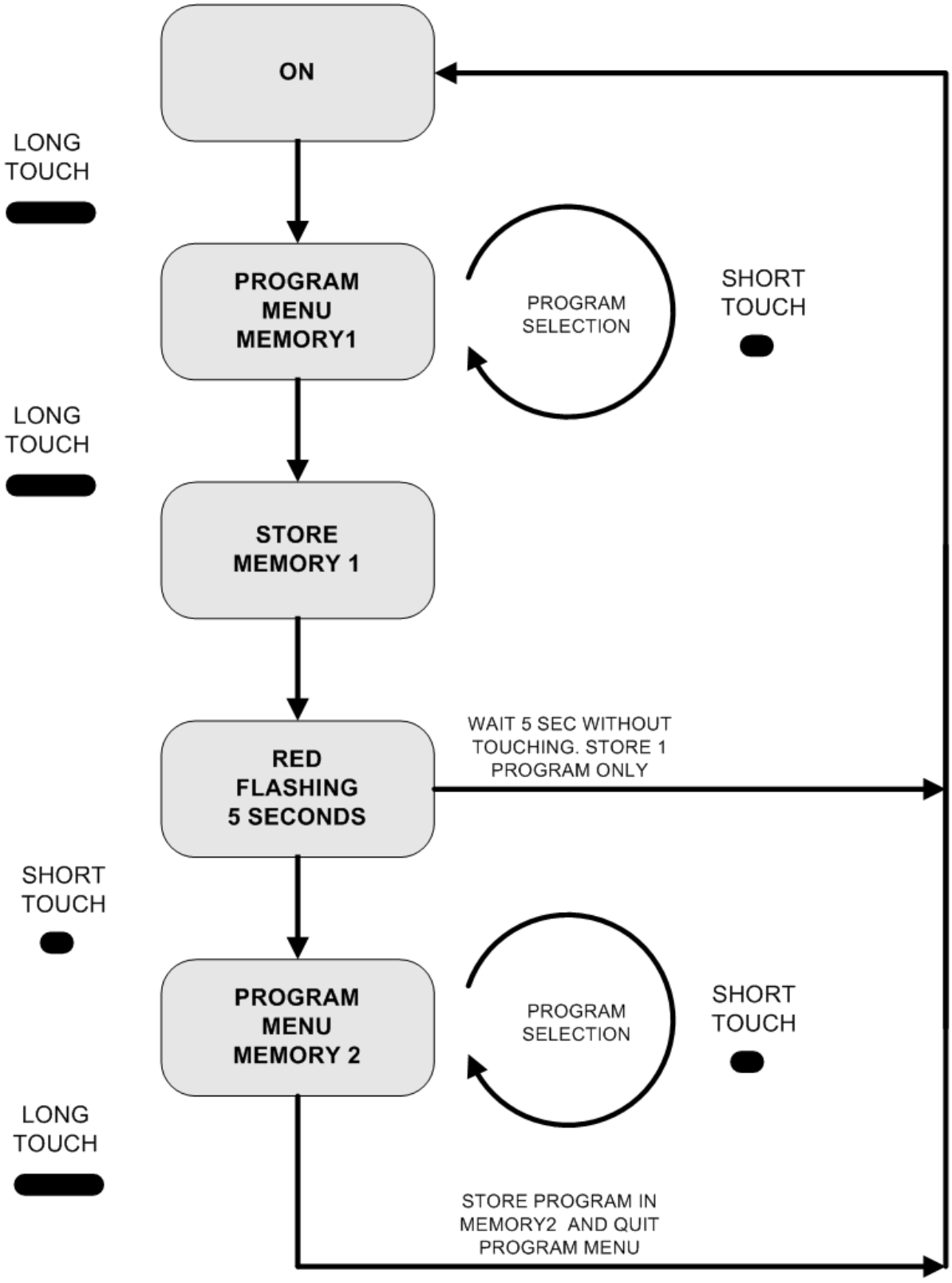
Store the desired program

When you have found the desired program you must store it in *memory 1* (see also *Dual Program)* by holding the magnet on the sensitive zone until the red light goes off. After move the magnet away the product will show a 5 seconds time bar again. If you wait until the bar time reaches its end the option to activate a second program will be disabled and the product will function as 1 memory only.

Activating the second program memory

After storing the program in *memory* 1 when the magnet is released the time bar is shown. If you slide the magnet before the bar reaches its end you will activate the second memory and enter the program menu. Select the desired program and colour 1 and 2 in same way as *memory 1* and store it by holding the magnet until the red goes off.
The product operation will be as 2 active programs..

Programming chart



Note:

- To turn off is not possible when program mode is active.
- The program list is circular. After the last one in the list comes the firs one.

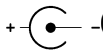
Battery charging

The illuminated product will lose brightness when battery level is low. If the battery reaches a critical low level, the illuminated product will flash a red light and then it will be turned off by the battery protection circuitry and can not be turned on until is charged.
You can make a complete battery charge when the brightness is low. The approximate battery life is specified in the program table for each model.

The batteries can be charged by using any multicharger available in Kosmos Malabares:

- AC adaptor 220V/12VDC - 300mA
- Travel AC auto voltage adaptor 110-240VCA / 12V 500mA
- charge distributor to be used by any 12V source / CAR adaptor

You can also use another standard AC adaptor in case of missing or broken charger, because the charging regulator has been included inside every illuminated product. This way you just need to buy an AC adaptor with the following specification:

- Output: 10 to 24VDC (12V recommended) / 300mA
- Connector type: female plug, 2,1mm
- Polarity: 

(built in reverse polarity protection in every product)

How to charge the batteries?

To charge the battery you should plug any of the charger outputs to the product charging connector.
If the product is on, it will turn off when receiving charge. This way, it is easy to check the charging procedure: if the juggling product does not turn off, it means there is some abnormal behaviour.
The charging time is 14 hours for full charge. It is possible to make partial charges by charging 7 hours, then using the product for a while and then charging again.

Note: charging the product for more than 14 hours will not increase the glowing time. In case you forget the charger connected to the product for longer time, the protection circuitry will avoid any overload.
Simultaneous charging of different Kosmos Malabares products connected to the same charger is allowed.

System reset

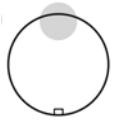
Every time the product is charged, a restart occurs. This reset does not clear the program memory. If for any reason a reset is needed just plug the charger into the AC outlet supply.

Program mode description

* Programs 1 & 5 also allow choosing desired colors to be used on following programs.

MODE	DESCRIPTION	BATTERY LIFE
1 *	**Rainbow effect, slow. Choose COLOR 1** Runs a 42 full colored step sequence. Before to jump to next program, current color is stored in memory as COLOR 1	Normal
2	**Color stored in program 1 (color 1) glows still** Last color shown in program 1 was stored and glows still. There are 42 color possibilities.	Normal
3	**Color 1 + medium speed STROBE** Color selected in program 1 (COLOR1) glows with STROBE FLASH at medium speed. There are 42 color possibilities.	Long
4	**Color 1 + fast speed STROBE** Color selected in program 1 (COLOR1 glows with STROBE FLASH at fast speed. There are 42 color possibilities.	Long
5 *	**Rainbow effect, slow. Choose COLOR 2** Runs a 42 full colored step sequence. Before to jump to next program, current color is stored in memory as COLOR 2	Normal
6	**Sequence COLOR 1 & COLOR 2 at low speed** Colors selected in programs 1 (COLOR1) & 5 (COLOR2) are sequenced at low speed. There are mode than 1500 possibilities.	Long
7	**Sequence COLOR 1 & COLOR 2 at medium speed** Colors selected in programs 1 (COLOR1) & 5 (COLOR2) are sequenced at medium speed. There are more than 1500 possibilities.	Long
8	**Sequence COLOR 1 & COLOR 2 at high speed** Colors selected in programs 1 (COLOR1) & 5 (COLOR2) are sequenced at high speed. There are more than 1500 possibilities.	Long
9	**Rainbow effect, slow speed + STROBE** Runs a 42 full colored step sequence plus fast strobe flash. This program is specially designed for juggling and spinning practice.	Long
10	**Rainbow effect at medium speed** Runs a 42 full colored step sequence. No color selection	Normal
11	**Sequence of 8 non conventional colors + STROBE** Runs a sequence of blue, orange, light blue, emerald, yellow, violet and light green plus strobe flash. This program can be selected for fast and dynamic juggling scenes.	Long
12	**Two color sequence with slow automatic change** Runs a 2 color sequence. Every color is changing gradually at different speed.	Normal
13	**Multi combination sequence + STROBE** Two color sequence is running and changing the colors every 2 seconds.	Long
14	**DEMO Program** Shows program 1 to 11, changing automatically every 15 seconds. The previously selected COLOR 1 & 2 will be displayed. Note: while in program mode, this program is identified by blinking red.	Long

Place of magnetic sensitive zone is opposite to the charging orifice.



DU2L® PROGRAM

Magnetic Programming

Looking after your product

The illuminated products have been designed for usual falls and kicks during juggling play. The casing material allows impacts on its surface. Use a soft cloth with water or non corrosive soap to clean it. Medicinal alcohol is also allowed.

- Avoid any liquid contact in the charging connector zone.
- Make a full battery charge prior to store your illuminated product for long periods.
- Make a full charge at least one every 4 month.
- Avoid exposures to extreme cold or hot conditions.
- Avoid shocks on the charging connector when the AC adaptor plug is inserted.
- Do not use under the rain.

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment

Twelve-month warranty:

Every illuminated product and the AC adaptor is warranted for 12 months if no signs of abnormal use are present. Keep the purchase receipt and the warranty card with the serial number and purchase date to valid the warranty.

Corrosion on charging connector or problems due to use of any kind of solvent are not covered by this warranty.

Frequently asked questions.

How many colours does a Kosmos illuminated product have?	KOSMOS uses RGB color LED technology combined with 8 bit RISC microprocessor to get a full set of 42 colours.
I would like to know more about the 42 colours.	Magnetic Programming technology allows freely choosing any of the 42 colours and combining it with another one. This extends the possible play combinations to over 1500. Colours can be used in 3 different flashing speeds.
Is my Kosmos illuminated product robust enough?	All of our models have been designed and tested for normal shocks during juggling play.
Do they have warranty?	Every Kosmos product has 12-month warranty from purchase date.
Do they include any accessories?	Every illuminated product set includes 1 carrying case, 1 magnet, user manual and warranty card.
What kinds of batteries are used in Kosmos Malabares products?	Kosmos uses NiMh "memory effect"- free batteries. This allows partial battery charging without compromising battery life.
How to charge them	Simply connect them to the charger. A battery charge controller is included in every Kosmos product to take care of the internal battery. The battery life is about 1000 charges.
What can I do if I lose the supplied charger?	A battery charge controller is included in every Kosmos product. This allows using any kind of AC adaptor that fulfils the specification. See Charging chapter in user manual.
How long is the glowing time?	Between 3 and 6 hours depending on the lighting mode.
Why my Kosmos Malabares does illuminated product turn off when plugging the charger?	This feature allows checking the charging procedure is happening normally.
Why does the product turn on when unplugging the charger?	This behaviour is correct. Slide the magnet to turn it off.
I have lost the magnet. What can I do?	The products are designed to be used with any kind of strong magnet.
I can not switch off my illuminated product.	That may happen because the program mode is active. Keep the magnet close to the sensitive area until the red goes off and try again.
The product behaviour is not right.	Try charging it. The system will restart every time the product receives charge.
Why I can not program my JS2 staff?	Be sure to have one half in MASTER and the other half in SLAVE mode. Program only the MASTER. The SLAVE will follow the MASTER one.
My ***JS²*** products do not synchronize..	1) Check if one device is in MASTER mode and the other/s in SLAVE. 2)Be sure all products are ***JS²***
I can not turn on the product. It makes a red flash every time I slide the magnet.	1) Try speeding up the sliding, 2) The battery is flat. Perform a complete charge.